ABSTRACT

An apparatus for decreasing the hardware load from L2 switch MAC address learning for Ethernet-Over-SONET technology that uses VLAN, simplifying frame transmission between Ethernet and SONET, and improving the reliability of each device is disclosed. An Ethernet frame and SONET frame convertible interface part establishes a register that holds an Ethernet frame specific VLANID and SONET frame specific STS path ID in opposition, and a multiplexing part that multiplexes an Ethernet frame having a specific VLANID corresponding to a specific STS path ID that is held by a register among an input plurality of Ethernet frame VLAN ID's.